PASTERNACK®
THE ENGINEER'S RF SOURCE

30 dB With 10 Bit Programmable TTL Controlled Attenuator, 2.4mm Female To 2.4mm Female, 0.03 dB Steps From 18 GHz To 40 GHz

TECHNICAL DATA SHEET PE70A6001

The PE70A6001 is 10 Bit Programmable 30 dB Pin Diode Attenuator with Step Resolution as Low as 0.03 dB over the Operating Frequency Range from 18 GHz to 40 GHz. The PE70A6001 is offered in a slim line housing measuring only 0.5" Height with 2.4mm Female Connectors.

Features

- 10 Bit Programmable 30 dB Attenuator
- 18 GHz to 40 GHz Frequency Range
- 30 dB Attenuation Range
- Step Resolution of 0.03 dB
- +10 dBm typ P1dB
- Insertion Loss 6 dB typ
- VSWR 2.5:1 Max

Applications

- Electronic Warfare
- Test & Measurement
- Military & Space
- Radar
- Military Communications Systems

Electrical Specifications (Values at 25°C, sea level)

Description	Minimum	Typical	Maximum	Units
Frequency Range	18		40	GHz
Mean Attenuation Range	0		30	dB
Input VSWR			2.5:1	
Power Rating		10		dBm
Survival Power Average from -65 to +25 deg C			24	dBm
Attenuation Flatness @ 30 dB		±1.5		dB
Accuracy of Attenuation 0 dB to 30 dB		±2		dB
Step Size	0.03			dB
Switching Time				
On Time			1	µs
Off Time			0.5	µs
DC Power Supply @ 100 mA		15		Volts
Logic Input				
Logic "0" (Bit Off)	-0.3		0.8	Volts
Logic "1" (Bit On)	2		5	Volts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 30 dB With 10 Bit Programmable TTL Controlled Attenuator, 2.4mm Female To 2.4mm Female, 0.03 dB Steps From 18 GHz To 40 GHz PE70A6001

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
Sales@Pasternack.com • Techsupport@Pasternack.com

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Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.8 in [45.72 mm]
Height	0.5 in [12.7 mm]
Weight	0.2 lbs [90.72 g]
Connector 1	2.4mm Female
Connector 2	2.4mm Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-65 to +125 deg C
Environment	MIL-STD-202F, METHOD 107
Humidity	MIL-STD-202F, METHOD 103B COND. B
Shock	MIL-STD-202F, METHOD 213B COND. B
Vibration	MIL-STD-202F, METHOD 204D COND. B
Altitude	MIL-STD-202F, METHOD 105C COND. B
Temperature Cycle	MIL-STD-202F, METHOD 107

Compliance Certifications (visit www.Pasternack.com for current document)

RoHS Compliant

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

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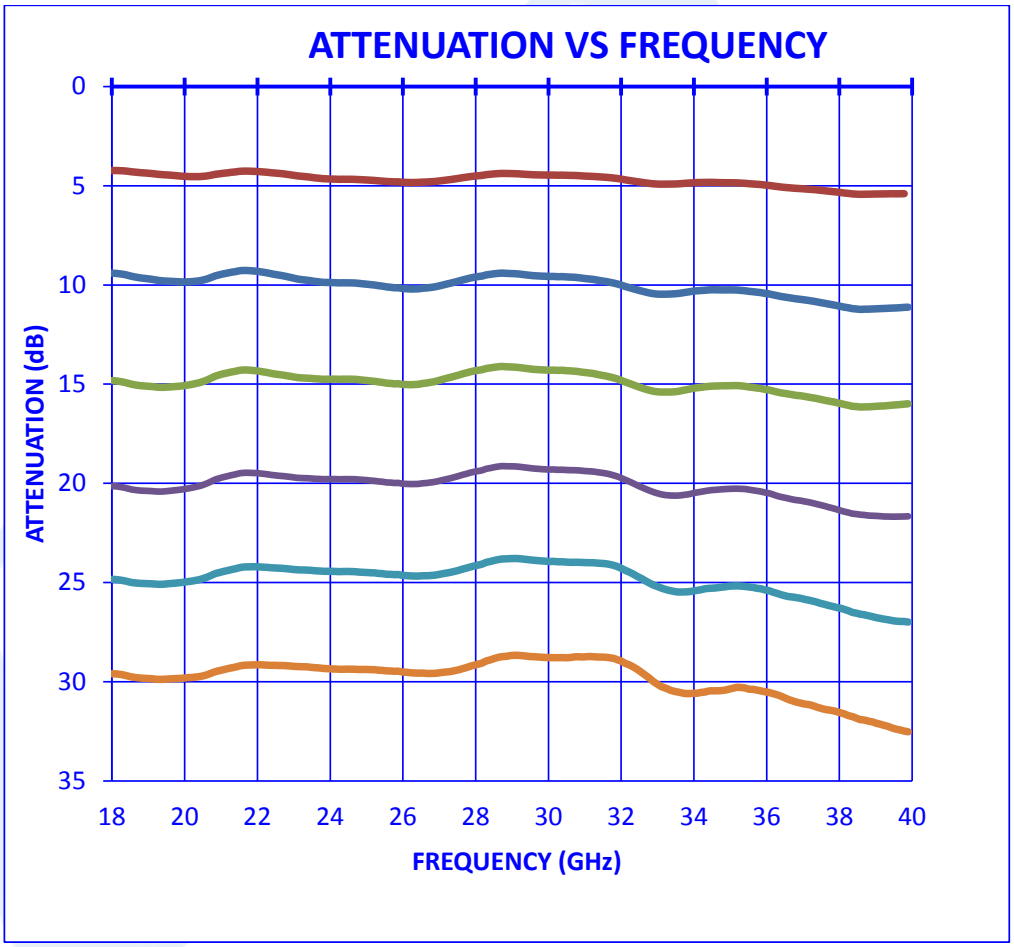
Performance Data

Attenuation vs. Frequency Plot



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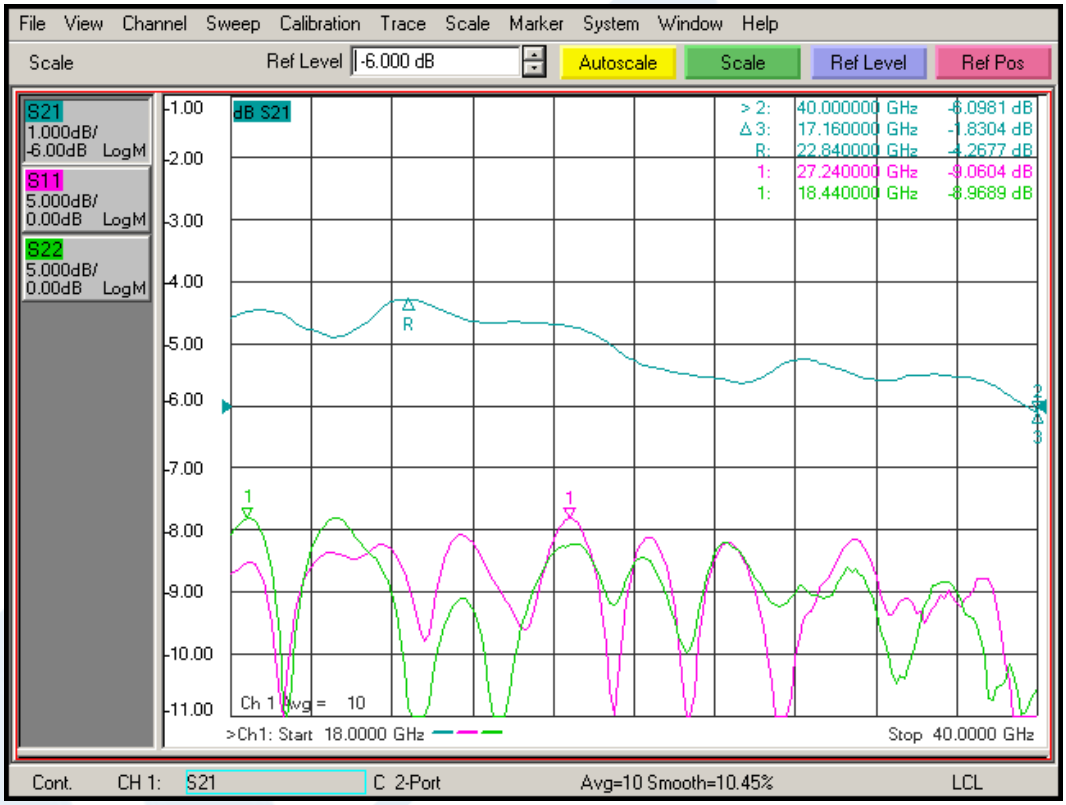
Insertion Loss & Return Loss



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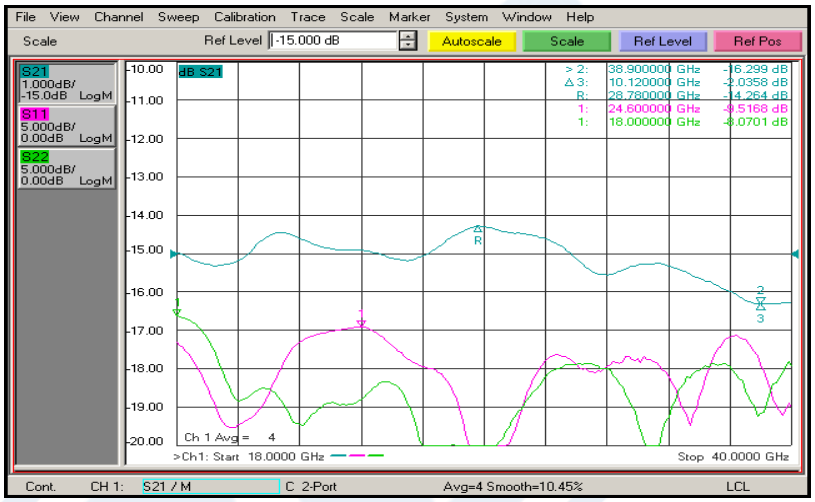
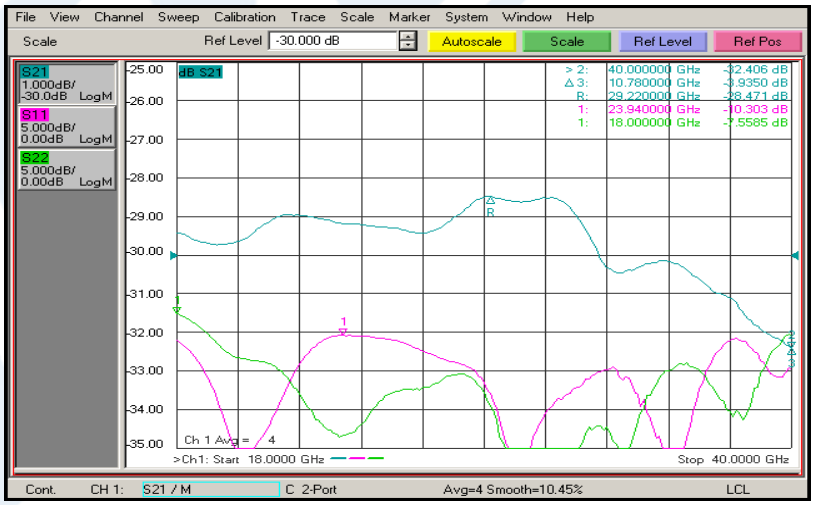
-15dB Attenuation



-30dB Attenuation



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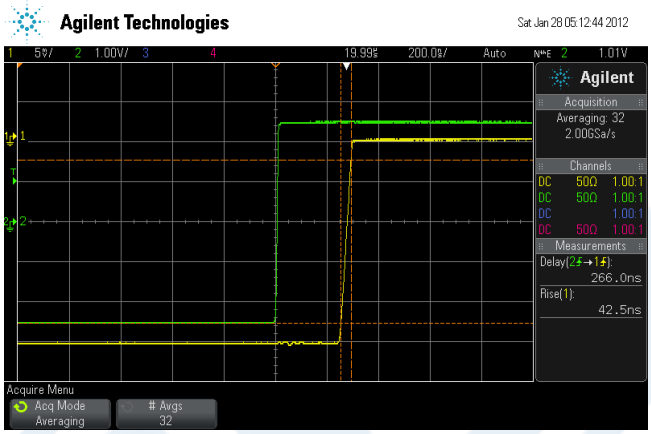
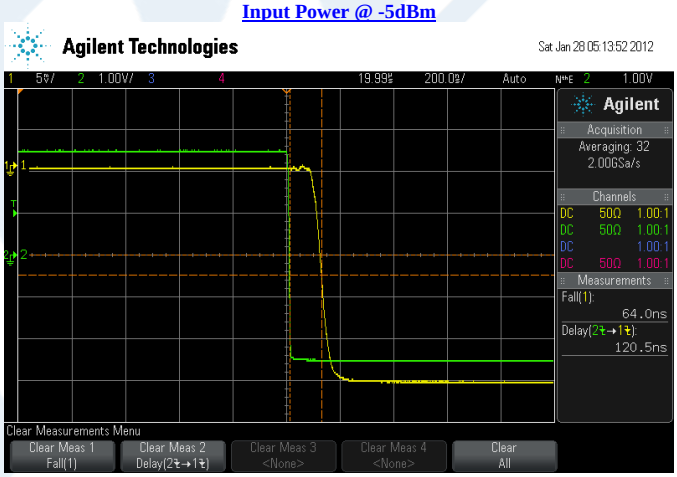
Delay On
Measured with a Tunnel Diode @ 30GHz
Input Power @ -5dBm



Channel 1 (Yellow): Tunnel Diode output
Channel 2 (Green): TTL Input from Signal Generator

Delay Off
Measured with a Tunnel Diode @ 30GHz
Input Power @ -5dBm



Channel 1 (Yellow): Tunnel Diode output
Channel 2 (Green): TTL Input from Signal Generator

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URL: http://www.pasternack.com/30db-programmable-2.4mm-female-2.4mm-female-0-watts-attenuator-pe70a6001-p.aspx

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PE70A6001 CAD Drawing

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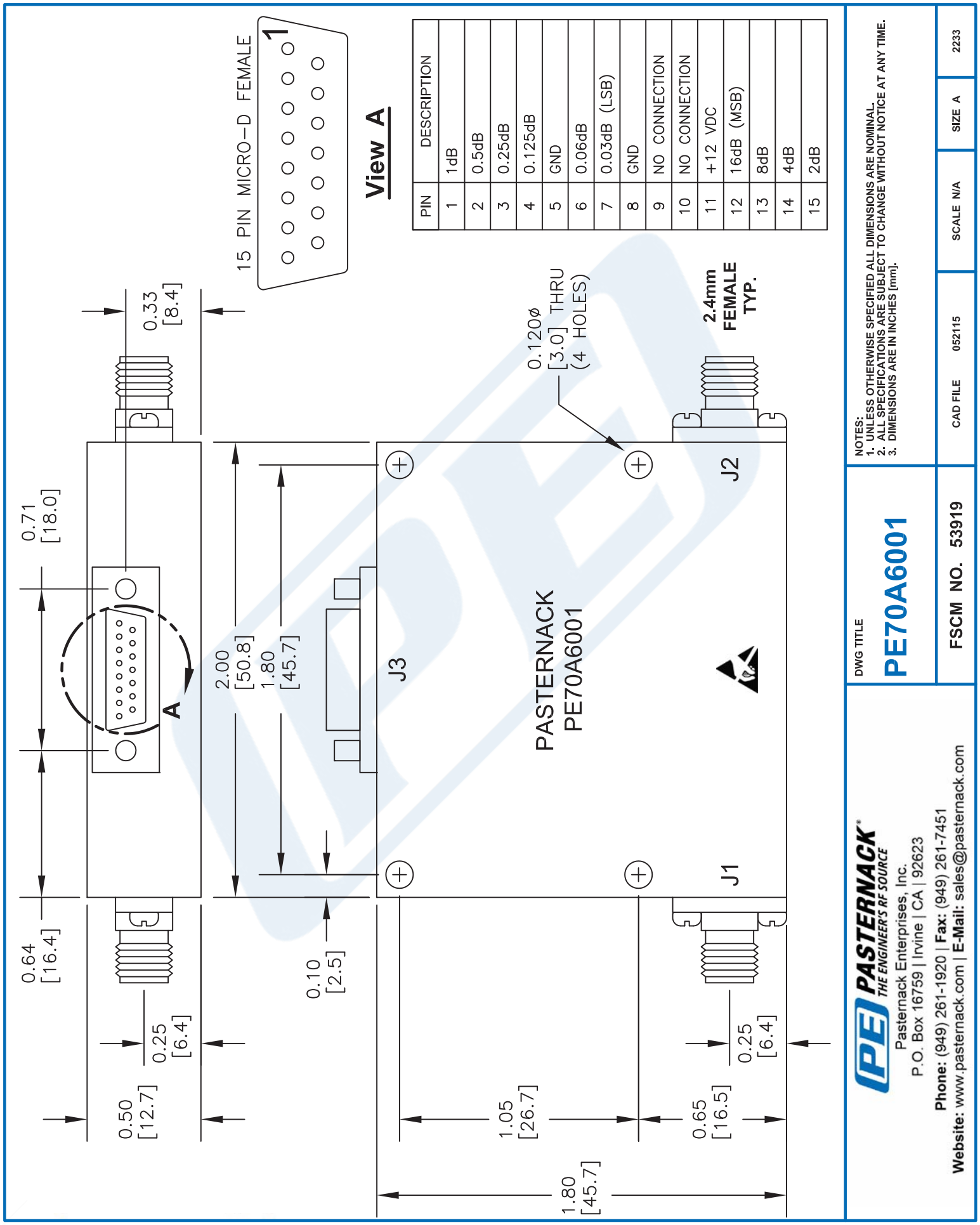

PIN	DESCRIPTION
1	1dB
2	0.5dB
3	0.25dB
4	0.125dB
5	GND
6	0.06dB
7	0.03dB (LSB)
8	GND
9	NO CONNECTION
10	NO CONNECTION
11	+12 VDC
12	16dB (MSB)
13	8dB
14	4dB
15	2dB

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